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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/710,757	07/30/2004	David Liller	81098405 (FMC 1746 PUS)	4756

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EXAMINER	
SOLIS, ERICK R	

ART UNIT	PAPER NUMBER
3747	

DATE MAILED: 03/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/710,757	LILLER ET AL.	
	Examiner	Art Unit	
	Erick R. Solis	3747	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *9-15* is/are allowed.

6)☒ Claim(s) *1,2,4,8,16,17 and 20* is/are rejected.

7)☒ Claim(s) *3,5-7,18 and 19* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 July 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the dependency of this claim is incorrect. It should depend from claim 19.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1,8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakae et al (US Patent 5818116) in view of Nonomura et al. (US Patent No. 6584962). Nakae et al teaches controlling the fuel injection of an engine in a hybrid vehicle wherein fuel injection does not commence until a given target state is reached (when the speed and intake air are stabilized). This reference, however is silent regarding the details of how the fuel injection proceeds during the starting sequence. Nonomura et al teach a fuel injection control for an engine wherein during starting the fuel injection to each cylinder is individually controlled and timed (see col. 3 and col. 6, lines 26+). It would have been obvious to one of ordinary skill in the art to have implemented the fuel injection strategy taught by Nonomura et al into Nakae et al's engine since this would have provided for more accurate dosing of the fuel amount at starting and aided in reducing exhaust emissions.

6. Claims 2 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakae et al in view of Nonomura et al as applied to claim 1 above, and further in view of either of Ament (US Patent No. 6769400) or Bayerle et al (US Patent No. 6796239). Both of these references teach abstaining from injecting fuel at start-up until a target state being reached, the target state being that the manifold air pressure is below a given value. It would have been obvious to have modified the combination of Nakae et al in view of Nonomura et al by letting the manifold air pressure drop below a certain value as the indicator of reaching the target state, as taught by both Hasegawa et al or Bayerle et al since this would have been an obvious equivalent way of determining stability in the air intake amount such that the engine would be ready for fuel injection while minimizing exhaust emissions.

7. Claims 1,4,8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hasegawa et al (US Patent 6274943) in view of Nonomura et al. (US Patent No. 6584962). Hasegawa et al teaches controlling the fuel injection of an engine in a hybrid vehicle wherein fuel injection does not commence until a given target state is reached (allowing a time delay to pass TIGEDLY). This reference, however is silent regarding the details of how the fuel injection proceeds during the starting sequence. Nonomura et al teach a fuel injection control for an engine wherein during starting the fuel injection to each cylinder is individually controlled and timed (see col. 3 and col. 6, lines 26+). It would have been obvious to one of ordinary skill in the art to have implemented the fuel injection strategy taught by Nonomura et al into Hasegawa et al's engine since this would have provided for more accurate dosing of the fuel amount at starting and aided in reducing exhaust emissions.

Allowable Subject Matter

8. Claims 9-15 are allowed.

9. Claims 3,5-7,18,19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Claim 20 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erick R. Solis whose telephone number is (703) 308-2651. The examiner can normally be reached on Monday-Thursday.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.

Erick R. Solis
Primary Examiner
Art Unit 3747

ers
February 27, 2006